

DESCRIPTIONS OF NEW NORTH AMERICAN PLECOPTERA. II.¹

By JOHN F. HANSON.

The following three new species of *Capnia* have come to my attention during the course of a revisionary study of the Capniidae. All three species are closely related to one another.

***Capnia ligulata*, n. sp.**

(Fig. 1.)

Males.—Similar in all general morphological details to other species of the genus *Capnia*. Length of body, 5 to 6 mm.; length of fore wing 5 to 6 mm.

Abdominal tergites without projections or protuberances. The ninth and tenth tergites and part of the eighth with mid-dorsal, membranous areas underlying the supraanal process. Supraanal process long and nearly cylindrical throughout its length; arising from a slightly enlarged base and extending forward to the hind margin of segment eight; only slightly curved in lateral view, straight in dorsal view; tapering only very slightly until very near the sharply pointed apex; 0.50 mm. in length (Fig. 1). Ninth abdominal sternite without a ventral appendage.

Collection data: Holotype, male—Boulder, Colo., March 20 (Hite) (in Museum of Comparative Zoology). Paratype, male—Boulder, Colo., March 17 (in Cornell University Collection).

Capnia ligulata is most closely related to the two other species described here, but is easily distinguished from these by the shape and length of its supraanal process and by its possession of wings of normal size in the male sex. Of previously described species of *Capnia*, *C. ligulata* is most closely related to *C. glabra* from which it differs in several characters. In *C. glabra* the supraanal process, as seen in dorsal aspect, is asymmetrically curved, and in lateral view is more curved than is that of *C. ligulata*. Also, the ninth tergite of *C. glabra* bears a pair of raised knobs which are not present in *C. ligulata*.

***Capnia lineata*, n. sp.**

(Figs. 2 and 3.)

Similar in all general morphological details to other species of the genus *Capnia*. Length of body, 5 mm. in male, 7 to 8 mm. in female; length of fore wing 0.5 mm. in male, 7 to 8 mm. in female. The fore wings of the male are so reduced as to be devoid of venation. They are about the size of the wing pads of normal immature Capnias. The hind wings are reduced to an even greater extent.

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Males.—Abdominal tergites without projections or protuberances. The ninth and tenth tergites and part of the eighth tergite crossed by a mid-dorsal, membranous stripe underlying the supraanal process. Supraanal process long and nearly cylindrical throughout its length; arising from a slightly enlarged base and extending forward to the middle of the eighth abdominal segment; straight in both dorsal and lateral views; in lateral aspect tapering gradually to the sharply pointed apex; 0.70 mm. in length (Fig. 3). Ninth abdominal sternite without a ventral appendage.

Female.—With a broad, membranous, mid-dorsal stripe extending across abdominal tergites one through eight. Eighth abdominal sternite only slightly modified: median portion of its posterior margin (lip of female reproductive opening) broadly rounded, straight, or broadly emarginate, and well sclerotized to its edge (Fig. 2).

Collection Data: Holotype male and allotype female—Troy, Idaho, April 22, 1911 (in my personal collection). Paratopotypes, 27 ♀ ♀ (in M.C.Z., Cornell University Collection, Ill. Nat. Hist. Survey Collection, and U.S.N.M.).

Capnia lineata is most closely related to the two other species described here. It is intermediate between these two species in the length of its supraanal process, and differs from them in having this process straight rather than curved. The extreme brachyptery of the male of *C. lineata* also distinguishes the species.

***Capnia zukeli*, n. sp.**

(Figs. 4 and 5.)

Similar in all general morphological details to other species of the genus *Capnia*. Length of body, 7 mm. in male, 9 mm. in female; length of fore wing, 2 mm. in male, 8 mm. in female.

Male.—Abdominal tergites without projections or protuberances. Tergites seven, eight, nine, and ten with a mid-dorsal, membranous stripe underlying the supraanal process. Supraanal process long and cylindrical; typically, sharply recurved over the abdomen and extending forward at least to the hinder margin of the seventh abdominal segment; curved slightly upward beyond the middle and then slightly downward again at the apex; in dorsal view, straight; 1.35 mm. in length (Fig. 5). Ninth abdominal sternite without a ventral appendage.

Female.—With a broad, membranous, mid-dorsal stripe extending across abdominal tergites one through eight. Eighth abdominal sternite only slightly modified: median portion of its posterior margin (lip of female reproductive opening) straight, and with a narrow, membranous region along the edge (Fig. 4).

Collection data.—Holotype, male—Moscow, Idaho, alt. 2560 feet, April 2, 1938 (Zukel). Allotopotype, female. Both types are deposited in my personal collection.

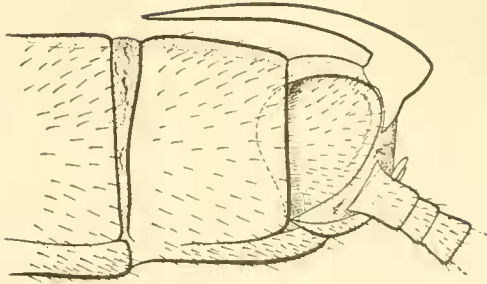
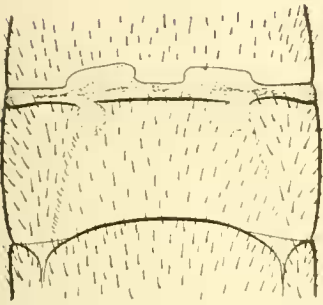


Fig. 1 CAPNIA LIGULATA ♂



C. LINEATA ♀

Fig. 2

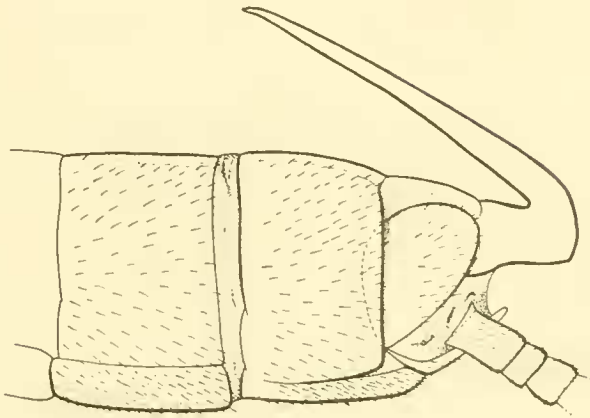
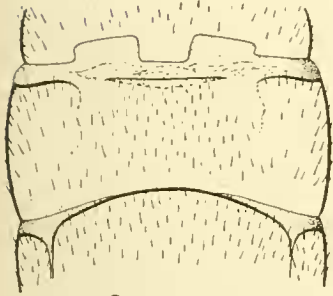


Fig. 3 C. LINEATA ♂



C. ZUKELI ♀

Fig. 4

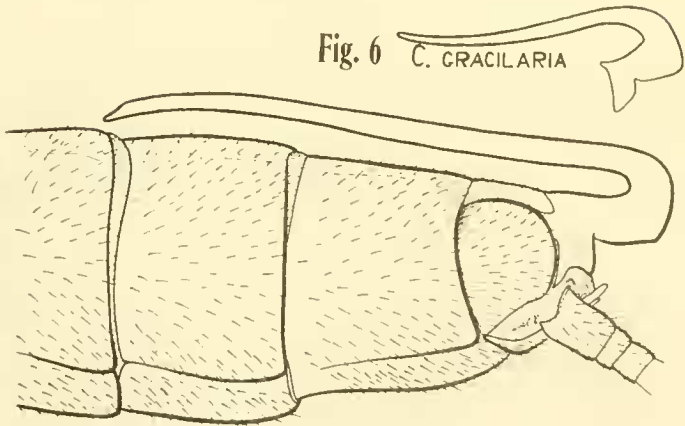


Fig. 5 C. ZUKELI ♂

Fig. 6 C. GRACILARIA



EXPLANATION OF PLATE

- Fig. 1. *Capnia ligulata* n. sp., ♂ genitalia, lateral view.
- Fig. 2. *Capnia lineata* n. sp., ♀ genitalia, ventral view.
- Fig. 3. *Capnia lineata* n. sp., ♂ genitalia, lateral view.
- Fig. 4. *Capnia zukeli* n. sp., ♀ genitalia, ventral view.
- Fig. 5. *Capnia zukeli* n. sp., ♂ genitalia, lateral view.
- Fig. 6. *Capnia gracilaria* Clsn., supraanal process of male, lateral view.

This species is most closely related to *Capnia gracilaria* Claassen (Fig. 6) from which it is distinguished easily in the male sex. Its supraanal process is about twice as long and twice as thick as that of *C. gracilaria*. It extends to the seventh tergite and bends slightly downward at the apex rather than upward as in *C. gracilaria*. The wings of the male of *C. gracilaria* extend beyond the tip of the abdomen, while the holotype of *C. zukeli* is brachypterous and its wings extend only to the third abdominal segment.

The supraanal process of *Capnia elongata* is nearly as long (1 mm.) as that of *C. zukeli* but is of a considerably different shape. The former species also bears a protuberance on the seventh abdominal tergite, while *C. zukeli* has none.

The female of this species is very similar to that of *C. lineata*. The single known female specimen of *C. zukeli* differs from that of *C. lineata* in that the edge of the lip of its reproductive opening is membranous. It is highly probable that when more female specimens of this species are known it will be found to be inseparable from *C. lineata* in this sex. This situation is known to be the case in certain other instances in *Capnia* and other genera of Plecoptera.

THE QUEEN OF A BRITISH GUIANA ECITON AND A NEW ANT GARDEN SOLENOPSIS.

(Hymenoptera: Formicidae.)

By NEAL A. WEBER, *University of North Dakota.*

From the bivouac of an army ant in British Guiana I secured the queen for which a new subspecies of the tropical American *Eciton* (*E.*) *burchelli* (Westwood) was erected and briefly described as *jeanae* in the American Midland Naturalist (26:329, 1941). Although the soldiers and workers were similar to the common form, the queen differed distinctly from that caste figured and described by Wheeler (Proc. Amer. Acad. Arts Sc., 56:297-307, 1921) and that of a Trinidad colony of a form long known as the subspecies *urichi* Forel which I also briefly described in 1941. A figure of the head of the queen of the new subspecies and descriptions of the castes follow.